

EXHIBIT B: SCOPE OF WORK

EXHIBIT B
TECK COMINCO AMERICAN, INCORPORATED
PEND OREILLE MINE TAILINGS DISPOSAL FACILITY NOS. 1 & 2
SCOPE OF WORK
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

This scope of work is to investigate metal contamination at the Teck Cominco American, Incorporated (Teck Cominco) Pend Oreille Mine Tailings Disposal Facility Nos. 1&2 (Site) in Metaline Falls, Washington. This scope of work prepared by the Washington Department of Ecology (Ecology) is to be used by the potentially liable party (PLP) to develop Work Plans in order to complete a Remedial Investigation/Feasibility Study (RI/FS) at the Site.

The RI is to supplement existing data and determine the nature and extent of contamination by hazardous substances at the Site. The FS shall evaluate remedial alternatives that are applicable to the Site. The information and data gathered during the RI/FS shall be used to identify if additional data needs be collected and determine an appropriate remedial action. The PLP shall furnish all personnel, materials, and services necessary for, or incidental to, performing the Remedial Investigation at the Site.

The RI/FS shall contain the following tasks:

Task I: RI/FS Project Plan

A. RI/FS Work Plan

A work plan outlining procedures for the Remedial Investigation shall be prepared which includes the following information:

1. Background Summary

Any pertinent Site information including, but not limited to:

- a. Maps – topographical, property lines, underground tank locations, surface water bodies near the vicinity of the Site, previous Site investigations; all maps shall be consistent with the requirement set forth in WAC 173-340-840(4) and be of sufficient detail and accuracy to locate and report all current and future work performed at the Site;
- b. Property histories.

2. Evaluation of Existing Data

A brief discussion of activities and data already collected during previous investigations, including but not limited to:

3. Task II Work Plans and Schedules

B. Sampling and Analysis Plan

The PLP shall prepare a Sampling and Analysis Plan for use during all Site characterization studies. The Sampling and Analysis Plan shall contain:

1. Field Sampling and Testing Plans – The plan shall describe in detail the sampling, testing, and data gathering methods, locations, frequency and other field study procedures that will be used for obtaining data required to complete the RI/FS. The Sampling and Testing Plan will include the following:
 - a. Specific sampling methods, including number and type of QA/QC samples;
 - b. Sampling locations and designations, including access considerations;
 - c. Types of media to be sampled and the number of samples of each;
 - d. Schedule and task assignments;
 - e. Supplies and equipment;
 - f. Monitoring well construction requirements;
 - g. Analytical procedures, methods, and detection limits;
 - h. Sample custody procedures, including holding times, containers, and preservation;
 - i. Shipping and handling arrangements.
2. Quality Assurance Project Plan (QAPP)
 - a. Field quality assurance/quality control (QA/QC) methods;
 - b. Chain of custody procedures;
 - c. Decontamination procedures;
 - d. Laboratory QA/QC methods.
3. Health and Safety Plan
 - a. Level of protection;
 - b. Hazard evaluation;
 - c. Waste characteristics;
 - d. Special considerations and emergency information.

C. Public Participation Plan

A Public Participation Plan shall be developed to provide the public with timely information and an opportunity to participate in accordance with WAC 173-340-600. A model Public Participation Plan is available from the Department of Ecology for use as the format for the Public Participation Plan.

Task II: Remedial Investigation

The purpose of the Remedial Investigation is to obtain the information necessary to supplement and verify existing data. That information will be used to characterize the Site and source(s), type(s), and extent of contamination present to sufficiently complete the Feasibility Study and select the appropriate Remedial Action. The resulting data shall meet the criteria set out in the QAPP and be of sufficient quality to develop an appropriate remedial action for the Site. The investigation shall meet the requirements stated in WAC 173-340-350, and more specifically, shall include the following elements:

A. Site Characterization

Collect analytical data on groundwater, soils, and surface water contamination in the vicinity of the Site. The data shall be sufficient to delineate the depth, areal extent, velocity and direction of contaminant movement, type, and concentration of contaminants.

1. Collect background information from the previous environmental investigations, other Ecology information, and any other historical data.
2. Hydrogeology
An investigation of the regional and Site specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Site
 - a. Evaluate and monitor all existing monitoring wells;
 - b. Install new groundwater monitoring wells and soil borings where needed;
 - c. Measure water levels in all wells and new borings;
 - d. Characterize regional stratigraphy and lithology based on well logs, maps, and any other information available;
 - e. Estimate hydraulic conductivity and porosity based on well logs, samples, and other general information available;
 - f. Prepare maps showing water levels and regional/Site hydrogeology.
3. Soils
 - a. Install soil borings and/or test pits;

- b. Characterize soil samples using the Unified Soil Classification System (USCS);
- c. Prepare boring logs for each boring.

B. Source and Contamination Characterization

- 1. Sampling locations shall be selected to characterize the wastes;
- 2. Analytical data collected shall help describe the nature, extent, and potential sources of contamination.

C. Potential Receptor Information

Collect data on the surrounding human and ecological populations that may be in contact with contaminants and potential routes of exposure for those populations.

- 1. Public Use/Site Access – Potential uses of the affected properties and the presence or absence of controls on Site access;
- 2. Potential Groundwater/Surface Water Uses – Any consumptive, recreational, or other use of groundwater and surface water in the area, and by which populations;
- 3. Environmental Receptors – Information on the presence of endangered or threatened species, potential habitats, and ecological environments.

Task III: RI/FS Report

The PLP shall complete a report documenting the remedial investigation/feasibility study as required by WAC 173-340-350(7) and (8). This report shall include the following elements:

A. Remedial Investigation

- 1. Background Information
 - a. Site History
 - b. Previous Studies
- 2. Nature and Extent of Contamination

The PLP shall prepare an assessment and description of the degree and extent of contamination. This should include:

 - a. Data Analysis – Analyze all data collected during Task II and prepare supporting maps and tables;

- b. Lab reports, previous investigations, well and boring logs, and any other documentation of characterization activities shall be included.

3. ARARs Analysis

Identify Applicable State and Federal Laws for cleanup of the Site in accordance with WAC 173-340-710.

4. Cleanup Levels/Risk Assessment Analysis

Perform a baseline Model Toxics Cleanup Act (MTCA) cleanup levels analysis/baseline risk assessment characterizing the current and potential threats to public health and the environment that may be posed by hazardous substances at the facility. The assessment will integrate cleanup standards and risk assessment as required by WAC 173-340-357 and WAC 173-340-708.

5. Discussion and Recommendations

- a. Interpret and discuss data to determine the nature and extent of the contamination and to support final recommendations for the Site;
- b. A summary of all possible and suspected source areas of contamination based on the data collected shall be included;
- c. Any known or potential risks to the public health, welfare, and the environment should be discussed;
- d. Recommendations should be provided identifying additional data requirements.

B. Feasibility Study

- 1. Identification of contamination to be remediated;
- 2. Identification and initial screening of treatment technologies;
- 3. Proposed remedial alternatives and evaluation with respect to MTCA criteria;
- 4. Recommended alternative.

Schedule of Deliverables

<u>Deliverables</u>	<u>Date Due</u>
Effective date of Order	Start
Teck Cominco to Submit Draft RI/FS Work Plan, Sampling and Analysis Plan, Health and Safety Plan, Public Participation Plan, and Schedule of Work to be Performed	90 days after start
Teck Cominco to Submit Final RI/FS Work Plan, Sampling and Analysis Plan, Health and Safety Plan, draft Public Participation Plan, and Schedule of Work to be Performed	45 days after Teck Cominco receives written approval from Ecology of documents
Teck Cominco to begin implementation of RI following accepted written Schedule of Work to be Performed	30 days after Teck Cominco receives approval of plans from Ecology
Tech Cominco to Submit Draft RI/FS Report	As approved in RI/FS Work Plan
Final RI/FS Report	30 days after Teck Cominco receives Ecology's written approval of draft
Progress Reports	Every 3 months